

**METHOD FOR IDENTIFYING COMPOUNDS TO TREAT MEDICAL
PATHOLOGIES ASSOCIATED WITH MOLECULAR CRYSTALLIZATION**

ABSTRACT OF THE DISCLOSURE

Numerous diseases and disorders are caused or exacerbated by the formation of crystalline aggregates of a biomolecule that is normally in solution. Such diseases and disorders include cataracts, sickle cell anemia, atherosclerosis, kidney stones, gallstones, gout, and Alzheimer's disease. The present invention provides methods to identify compounds that can inhibit the adverse formation of crystalline aggregates, including fibrils, of a target biomolecule. These methods include the screening of large combinatorial libraries. The identified compounds are tested for their therapeutic utility in treating medical conditions caused or exacerbated by the adverse crystallization of biomolecules. Molecules that are slight modifications of the target biomolecule are found to be particularly effective in inhibiting the adverse crystallization, including fibril formation, of a target biomolecule.

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